

REMARKS

The Office Action dated May 26, 2004 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 1-8 having previously been cancelled, 9-16 are pending in the present application. Claims 9 and 16 are independent claims. No new matter has been added. Claim 16 having previously been allowed, claims 9-15 are respectfully submitted for consideration.

Objection to the Specification:

The specification of the present application was objected to for allegedly not including all continuation and priority data related to the present application. However, the specification had, in fact, previously been amended to include exactly this information. The previous amendment was included on page 1 of the *Request for Continuation of an International Application Under 37 C.F.R. § 1.53(b)*, filed July 5, 2001, a copy of which is attached hereto for the Examiner's convenience. Therefore, withdrawal of the objection to the specification of the present application for lacking continuation and priority data is respectfully requested.

Rejection of Claims 9-15 under 35 U.S.C. § 103 (a):

Claims 9-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,054,894 to Wright et al. (Wright '894) in view of U.S. Patent No. 5,898,733 to Satyanarayana (Satyanarayana '733). It is acknowledged in the Office Action that Wright '894 fails to disclose:

the transmitter being configured such that for each of the two transmitter paths, when an information signal is being transmitted on that transmitter path, the carrier frequency for transmission on the other transmitter path is being selected, such that, in each case, the carrier frequency being selected for a channel is distinct from a previous carrier frequency at which that channel is transmitted.

However, it is alleged in the Office Action that Satyanarayana '733 may be combined with Wright '894 to yield the claimed invention. This rejection is respectfully traversed.

Claim 9, upon which claims 10-15 depend, recites a transmitter for transmitting RF data in an RF communication network using a plurality of carrier frequencies, the RF data being represented by an information signal at a selectable carrier frequency. The transmitter includes a data splitter arranged to receive the information signal modulated onto an intermediate frequency lower than the carrier frequency, and two transmitter paths each having an input connected to the data splitter and each having a frequency converter arranged to upconvert the intermediate frequency modulated signal to a respected carrier frequency, the carrier frequency being individually selectable for each transmitter path, the transmitter being configured such that for each of the two transmitter paths, when an information signal is being transmitted on that transmitter path, the carrier frequency for transmission on the other transmitter path is being selected, such that, in each case, the carrier frequency being selected for a channel is distinct from a previous carrier frequency at which that channel is transmitted.

As discussed in the present specification, transmitters according to the claimed invention can make use of power combiners that provide a low level of isolation within

the power combiner, which can be achieved easily and inexpensively. Wright '894 and Satyanarayana '733, taken either individually or in combination, fail to disclose or suggest the elements of any of the presently pending claims. Therefore, the prior art fails to provide at least the above-discussed advantages of the claimed invention.

Wright '894 discloses digital control of a Linear Nonlinear Component (LINC) linear power amplifier, and a method of linear amplification from two non-linear amplifiers. The method of Wright '894 includes decomposing an original signal into two constant amplitude envelope, phase varying signals, which, when combined, constructively and destructively interfere to reform the original signal. Wright '894 discloses that the original signal is separated by a signal component separator and is transmitted across separate signal paths along which each phase signal is upconverted and amplified. In addition, Wright '894 discloses that, ordinarily, an LINC amplifier requires that both analogue chains or signal paths be generally identical and free from imperfections. Therefore, it is implicit in Wright '894 that processing including up conversion of each signal component is identical along each signal path. Wright '894 also discloses an arrangement that provides an adaptive compensation and control scheme to compensate for the unavoidable differences between the analogue paths. The compensation of the two signals which are initially constant envelope amplitude is arranged according to Wright '894 to make the two phase component signal paths match all the way to the point of combination.

However, Wright '894 fails to disclose or suggest at least the "transmitter being configured such that for each of the two transmitter paths, when an information signal is being transmitted on a transmitter path, the carrier frequency for transmission on the other transmission path is being selected", as recited in claims 9-15 of the present application. In other words, Wright '894 fails to disclose or suggest at least that two transmitter paths are arranged to alternately transmit a channel at different carrier frequencies. Instead, as discussed above, Wright '894 discloses an arrangement that is configured to make the two component signal paths match all the way to the point of combination. Wright '894 also fails to disclose or suggest at least "the carrier frequency being individually selectable for each transmitter path", as recited in claims 9-15 of the present application.

Satyanarayana '733 discloses a packet hopping system with sliding frequency, and a transceiver for the system. Satyanarayana '733 also discloses an arrangement for transmitting signals using a carrier frequency which is varied over a range such that successive transmissions of packets are transmitted at different carrier frequencies.

However, Satyanarayana '733, like Wright '894, fails to disclose or suggest at least that "when an information signal is being transmitted on that transmitter path, the carrier frequency for transmission on the other transmitter path is being selected", as recited in claims 9-15 of the present application. Rather, Satyanarayana '733 discloses an arrangement for transmitting signals using a carrier frequency which is varied over a range such that successive transmissions of packets are transmitted at different carrier

frequencies. Therefore, Wright '894 and Satyanarayana '733, taken either individually or in combination, fail to disclose or suggest the subject matter recited in claims 9-15 of the present application. Hence, claims 9-15 are patentable over Wright '894 and Satyanarayana '733 at least for this reason.

In addition, assuming, *arguendo*, that one of skill in the art did combine the arrangements disclosed in Wright '894 and Satyanarayana '733, the combination would invariably lead to the carrier frequency used for upconversion in the RF conversion blocks 23 and 24 disclosed in Wright '894 being varied by the same amount in each signal path. This is true at least because, as mentioned above, Wright '894 discloses an arrangement that is configured to make the two component signal paths match all the way to the point of combination. As such, Wright '894 actually teaches away from upconverting by different amounts in each RF upconversion block, and it is well established in U.S. Patent law that a reference that teaches away from a claimed invention cannot properly be used as a basis upon which to make a prior art rejection.

Further, even if the signals were upconverted by different amounts or, as recited in claims 9-15 of the present application, if "when an information signal is being transmitted on one transmitter path the carrier frequency for transmission on the other transmitter path is being selected", the combination of the signals in the amplifier power combiner 25 illustrated in Figure 2 of Wright '894 would still not result in the transmission of RF data at a selected carrier frequency.

At least in view of the above, reconsideration and withdrawal of the rejection of claims 9-15 under 35 U.S.C. § 103(a) over Wright '896 in view of Satyanarayana '733 is respectfully requested.

Allowable Subject Matter

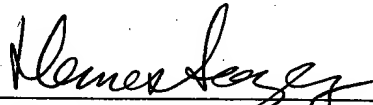
Applicant thanks the Examiner for allowing claim 16.

Applicant respectfully submits that all of the comments included in the Office Action have been addressed and that the objection and rejection included in the Office Action have each been overcome. Hence, Applicant respectfully further submits that, at least in view of the above, claims 9-16 of the present application contain allowable subject matter. Therefore, it is respectfully requested that all claims pending in the present application be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the Applicant's undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Copy of Request for Continuation of an International Application Under 37
C.F.R. § 1.53(b) – filed June 5, 2001